
Navy Reusable Learning Object (RLO) Development Process



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DISCLAIMER: Content developers should refer to the Policy and Guidelines section of Navy E-Learning for the latest version of this document. The version of this document found on Navy E-Learning supersedes any previous versions of this document.

For questions and comments, please email
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Navy Reusable Learning Object (RLO) Development Process—Version 1.0***Abstract***

On October 8, 2002, CNET Pensacola, FL MSG R 081538Z OCT 02 announced the Navy's adoption of the Reusable Learning Object (RLO) Process Model as the cornerstone instructional strategy to be used to develop all future learning materials. The Navy's selection of the RLO Process Model was based on the model's ability to support the Navy's education, training, and performance technology goals.

The RLO Process Model can be used to support the development of instructor-led, print-based, and self-paced E-Learning content. However, these guidelines specifically address the content development requirements for self-paced E-Learning content. Guidance for developing instructor-led and print-based instruction will be provided following the release of this document.

Updates to this document will be made periodically to provide content developers with further guidance.

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1.0 Why Was the Navy RLO Process Model Created?

1.1 Introduction

In an effort to provide Sailors with the “tools and opportunities” to grow and develop, a comprehensive suite of E-Learning content needs to be developed that can be used Navy-wide to support a variety of training requirements. The Navy’s RLO Process Model has been adapted from the Cisco Systems’ Reusable Learning Object (RLO) Strategy in an effort to produce small, flexible, granular objects that can be hosted on Navy E-Learning.

1.2 Advanced Distributed Learning (ADL)

- The Advanced Distributed Learning (ADL) initiative was established by the Department of Defense (DoD) in 1997 to develop a DoD-wide strategy for using learning and information technologies to modernize education and training and to promote cooperation between government, industry, and academia to develop E-Learning standardization.
 - ADL's vision is to provide access to the highest quality education and training that is tailored to individual needs and delivered cost-effectively anywhere, anytime.
 - The ADL initiative has defined high-level requirements ("-ilities") for learning content, such as content:
 - Reusability
 - Accessibility
 - Durability
 - Interoperability
-

1.3 Sharable Content Object Reference Model (SCORM)

- The SCORM is a collection of specifications that provides a comprehensive set of E-Learning capabilities that enable interoperability, accessibility, durability, and reusability of web-based learning content.
 - It is intended to create one unified "reference model" of interrelated technical specifications and guidelines designed to meet DoD’s high-level requirements for web-based learning content.
 - The SCORM includes aspects that affect learning management systems and content authoring tool vendors, instructional designers and content developers, training providers, and others.
-

1.4 Executive Review of Navy Training (ERNT)

- The Revolution in Navy Training began when the Chief of Naval Operations chartered the Executive Review of Navy Training (ERNT) in October 2000 to develop a strategy and implementation plan for revolutionizing Navy training.
- ERNT was directed to:
 - Look at every aspect of training and education.
 - Determine what the Navy was doing right.
 - Determine what the Navy was doing wrong.
 - Compare those findings to what is being done within industry.
 - Coordinate with experts in the fields of human performance, education management, psychology, and organizational leadership to make a final recommendation.
- Based upon those findings, and subsequent recommendations, ADM Clark stood up Task Force for Excellence through Commitment to Education and Learning (EXCEL) as the implementation arm of the revolution.
 - The Revolution in Navy Training is all about mission accomplishment and providing Sailors with the tools and opportunities to grow professionally and personally.
 - Navy training is going to become performance based.
 - The Sailor Continuum will be the tool that the Navy will use to identify the knowledge, skills, and abilities that Sailors and the Navy need for mission accomplishment.
- **Task Force EXCEL (TFE)**
 - Task Force EXCEL is creating major cultural changes by focusing Navy learning on fleet mission requirements through the use of human performance measures – providing Sailors with the “tools and opportunities” to grow and develop, both professionally and personally, while improving mission accomplishment.
 - The Four Quadrant Human Performance System Model (HPSM) is the underlying human performance process by which Task Force EXCEL and partners are redefining Navy policies, structures, and mechanisms. For more information on HPSM, go to <http://www.excel.navy.mil/human.htm>.
 - **The 5 Vector Model (5VM)** defines the parameters around which a Sailor’s personal and professional development is

designed. Eventually, the 5VM will change the promotion and detailing process. For more information on the 5VM, go to <http://www.excel.navy.mil/>. The 5 Vectors are:

- o Professional Development
- o Personal Development
- o Leadership
- o Certifications & Qualifications
- o Performance



1.5 Cisco Reusable Learning Object (RLO) Strategy

- Cisco Systems, Inc. recognized the need to move from creating and delivering large inflexible training courses, to database-driven objects that could be reused, searched, and modified independent of their delivery media.
- To accomplish their mission, the original RLO strategy was defined in the fall of 1998. Since then, Cisco's overall E-Learning Solution Architecture and metadata strategy has evolved. The current version is *Designing Information and Learning Objects Through Concept, Fact, Procedure, Process, and Principle Templates*, Version 4.0, November 2001.

1.6 RLO Process Model Expansion

In an effort to meet the needs of today's Sailors, the RLO Process Model has been expanded beyond its original role as a model for E-Learning content development. The RLO Process Model will be used to develop content for the Integrated Learning Environment (ILE) which includes:

- Job performance aids
- Performance support
- E-Learning content
- Technical publications
- Training materials
- Reference materials
- Education courses
- Instructor-led training

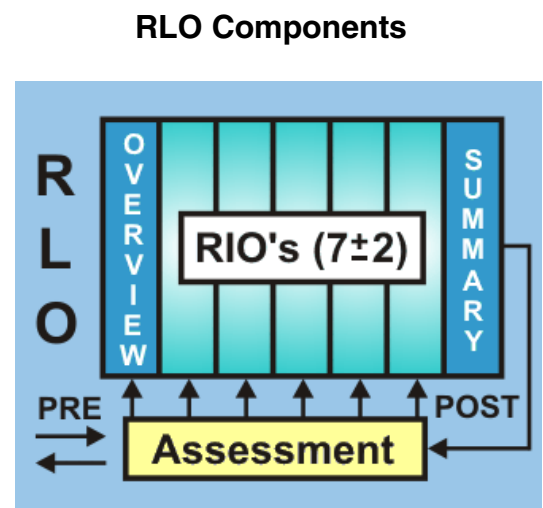
2.0 What Is the RLO/RIO Relationship?

Introduction

Using the Navy RLO Process Model is like designing any type of instruction – only better because it is based on pre-defined templates. Reusable Learning Objects (RLOs) and Reusable Information Objects (RIOs) are created to provide instruction and training for mission accomplishment and to provide Sailors with opportunities to grow both professionally and personally.

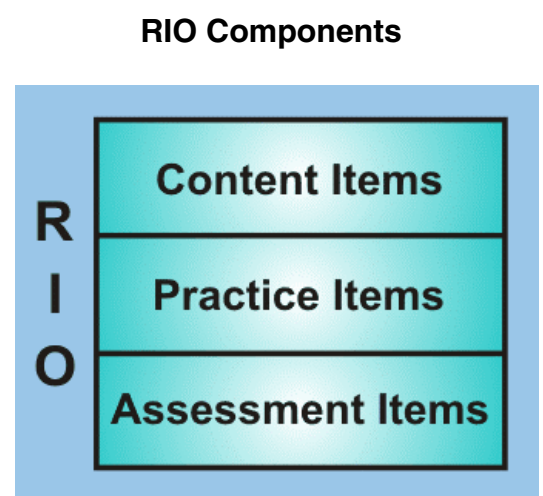
2.1 What is a Reusable Learning Object (RLO)?

- An RLO consists of granular content objects that can be combined to match the needs of the learner, authors, and organization.
- “Reusable” is used to emphasize one of the advantages of developing smaller, chunked pieces of learning and information.
- An RLO is referred to as a “lesson.”
- Each RLO contains a Pretest, an Overview, five to nine RIOs, a Summary, and a Quiz



2.2 What is a Reusable Information Object (RIO)?

- RIOs are self-contained chunks of information built around a single learning objective.
- RIOs contain content, practice, and assessment items.
- Content items are determined by RIO type.
- Groups of RIOs are combined to form the content portion of an RLO.
- A RIO is referred to as a “topic” within the RLO.



3.0 Development Team Approach

Development Teams

Each Development Team is composed of at least one instructional systems specialist (ISS) and at least one subject matter expert (SME) who work together to design and create lesson content. Each Development Team is assigned graphics support to produce graphic media for instruction.

- The role of the ISS is to analyze, design, and develop RLOs using required templates. Thus, the ISS:
 - Ensures the product is instructionally sound.
 - Ensures the *Navy Reusable Learning Object (RLO) Content Development Guidelines* are followed.
 - Ensures review feedback is implemented.
 - The role of the ISS, serving as team leader, is to lead the development of RLOs using required guideline templates. Thus, the team leader:
 - Oversees the development process of Development Team.
 - Ensures the design and development schedule is followed and milestones are met.
 - Serves as the point of contact (POC) for clients requesting development of products.
 - The role of the SME is to provide subject matter expertise and guidance to the team leader. Thus, the SME:
 - Ensures content is accurate and up to date.
 - Provides additional need-to-know content.
 - Participates in media selection, searching for media, and providing guidance to graphics support personnel.
 - The role of graphic media support personnel is to provide graphic media as requested by the team leader and SME. Thus, graphic personnel:
 - Repurpose existing graphics.
 - Develop original graphics requested by Development Team.
 - Develop animation requested by Development Team.
 - Develop video requested by Development Team.
-

4.0 The Navy RLO Process Model



Introduction

The Navy RLO Process Model uses six instructional systems design (ISD) phases. This systematic process for planning, designing, and creating instruction provides the guidance for developing reusable learning objects.

Six Phases

The ISD phases have sub-phases that interrelate and often occur concurrently.

- **Planning**
 - Production Manager Review
 - Development Team Review
- **Analysis**
 - Instructional Architecture
 - RLO and RIO Analysis
 - Analysis Review
- **Design**
 - Design of RIO Components
 - Design Review
- **Development**
 - Development of RLO Components
 - Development of RIOs
 - Final Development Team Review
 - Peer Review Evaluation
 - Quality Assurance Evaluation
- **Implementation**

- **Evaluation**

- Formative Evaluation
 - Summative Evaluation
-

Advantages of Using the Navy RLO Process Model

Advantages of using the Navy RLO Process Model to develop instruction include:

- An **RLO** is based on a single objective, derived from a specific job task.
 - Each **RIO** is built upon an objective that supports the RLO objective.
 - Development of RLOs and RIOs can occur in any order, or simultaneously because each RIO is an independent product.
 - Different authors can develop individual RIOs.
 - Building objects that form RLOs and RIOs is similar to building any instructional product.
-

4.1 RLO Process Model Phase 1: Planning

Introduction

During the Planning Phase, an instructional requirement is received from the tasking client. An initial review of the requirement is performed, and a Development Team (DT) is assigned to the project.

4.1.1 Production Manager Review

In this sub-phase, the instructional requirement receives an initial review by the Production Manager, who then assigns resources to the project.

- Perform initial requirement review.
 - Assign DT team leader (ISS).
 - Assign additional ISS and SME resources to DT.
-

4.1.2 Development Team Review

During the Development Team Review, the DT team leader establishes the team roles and responsibilities and assigns them to the team members. Then, the DT reviews the instructional requirement.

- Establish roles and responsibilities of team members.
 - Determine instructional scope of the requirement.
 - Draft Plan of Action and Milestones (POA&M).
-

4.2 RLO Process Model Phase 2: Analysis

Introduction

In the Analysis Phase, the assigned instructional requirement is analyzed. Information is gathered and a plan for developing RLOs and RIOs is created. The purpose of this phase is to determine what will be taught in the RLOs and RIOs that will be developed. If the instructional requirement is large, it may be broken into multiple modules, or sections. One module is analyzed at a time. The purpose of this phase is to guide the design of instruction. The DT completes the Analysis Phase by producing a Reusable Learning Object Analysis Document and Cover Sheet.

4.2.1 Instructional Architecture

In this sub-phase, content is reviewed to determine the breakdown of the instructional requirement. Learning objectives are created for each large instructional unit if any are identified.

- Identify existing content (e.g. TRAMANS, PowerPoints, RLOs).

Potential Content Sources	
SME (self and others) – subject matter knowledge	Avoid copyright and distribution issues – If in doubt, LEAVE IT OUT!
TRAMAN(s)/NRTC(s)	
RLO(s) and RIO(s)	
New data/information sources: <ul style="list-style-type: none"> ▪ NAVAIR, NAVSEA, etc. publications ▪ Other DoD publications ▪ Manufacturers 	

- Become familiar with existing content.
- Break instructional requirement into large logical units (i.e. Courses, Modules, and/or RLOs).
- Develop learning objectives for each Course and Module, if identified.
- Select instructional unit for development.

4.2.2 RLO and RIO Analysis

In this sub-phase, the learning objectives, RIO types, prerequisite knowledge, and references are identified for each RLO and RIO in the selected instructional unit.

**4.2.2.1
Determine RLO
and RIO
Architecture**

To establish the RLO and RIO architecture, the following items must be completed.

- Analyze content for selected instructional unit.
 - Determine information the learner needs to know.
 - Determine main tasks and topics.
 - Determine sub-tasks or sub-topics.
 - Organize tasks or topics.
 - Sequence tasks or topics.
-

**4.2.2.2
Create RLO and
RIO Learning
Objectives**

Learning Objectives state what the learner should know or be able to do after completing the instructional module.

- Develop one main (terminal) learning objective for each RLO.
 - Develop one supporting (enabling) learning objective for each RIO.
 - All RIO objectives should work together to achieve the main RLO objective.
-

**4.2.2.3
Determine RIO
Types**

RIOs are classified by the type of content material that they contain and the type of learning outcome that occurs. Different types of learning require different content, instructional methods, and practice items to achieve their learning objective. Each RIO type has a specific design and required features.

- RIO Classifications:
 - **Concept – a class** of items that shares common, critical features and is known by a common name
 - **Concrete concept** – tangible in time and space
 - **Abstract concept** – are less tangible and cannot be directly represented by diagrams
 - **Fact** – something with real, demonstrable existence; unique one-of-a-kind pieces of information
 - **Procedure** – a sequential set of steps to be followed by one individual to accomplish a task or make decisions
 - **Process** – a series of actions, changes, or functions that achieve an end or result
 - **Principle** – a job task that requires judgment or when guidelines must be applied to a situation
-

This table provides an overview of the five RIO types used in the RLO Process Model.

RIO TYPE CLASSIFICATION		
TYPE OF RIO		WHEN TO USE
C O N C E P T	concrete concept – tangible in time and space Examples: battleship, helo, rotary pump	<ul style="list-style-type: none"> To teach a group of objects, symbols, ideas, or events that <ul style="list-style-type: none"> are designated by a single word or term share a common feature vary on irrelevant features To answer the questions: “What is it?” or “Why is it so?”
	abstract concept – defined, not tangible in time and space. Examples: honor, loyalty, flexibility	
F A C T	fact – something with real, demonstrable existence Examples: The sun rises in the East. The (American) alphabet contains 26 letters. The Commander-in-Chief of the Armed Forces of the United States is the President of the United States.	<ul style="list-style-type: none"> To teach unique, specific, one-of-a-kind pieces of information such as <ul style="list-style-type: none"> statements data pictures of specific objects
P R O C E D U R E	procedure – a sequential set of steps to be followed by one individual to accomplish a task or make decisions; a way of performing or effecting something (causing something to happen) Examples: How to salute your superiors; How to stand a watch; How to troubleshoot _____.	<ul style="list-style-type: none"> To teach a procedure performed on the job that <ul style="list-style-type: none"> is done the same way each time within a given situation is clear To answer the question: “How do I do it?” To make a decision To list directions for procedural tasks
P R O C E S S	process – a series of actions, changes, or functions that achieve an end or result; can be mechanical, business, or scientific Examples: Building a house; Buying a car; Moving from your last duty station to Pensacola, Florida;	<ul style="list-style-type: none"> To teach how a system works To support underlying job tasks To teach a task to be done by more than one person – involves many persons. To answer the questions: <ul style="list-style-type: none"> “How does it work?” or “What happens when...?”
P R I N C I P L E	principle – how to apply a rule, standard, law, or guideline; application of a fixed or predetermined policy or mode of action in different situations Examples: Guidelines for applying the Military Code of Conduct; Selecting the best route to a target	<ul style="list-style-type: none"> To create a job task that requires judgment, or When guidelines must be applied to a job situation. To answer the question: “How do you apply the rule/law/guideline/policy to the situation?”

**4.2.2.4
RLO Content
Requirements**

During this activity, required content is identified and grouped for each RLO and RIO.

- Identify required references for each RIO.
 - Determine required prerequisite knowledge.
 - Group content for RIO design.
 - Search for additional information, if required.
-

**4.2.2.5
Complete
Analysis
Document**

Upon completion of the Analysis Phase, a Reusable Learning Object Analysis Document and Cover Sheet are produced. In this document the Development Team lists each RLO and RIO that will need to be created to teach the content that was selected for development. This document establishes the framework for the design of instruction. Once the Design Phase begins, some changes may need to be made to the structure and arrangement of the RLOs and RIOs.

The Analysis Document Cover Sheet includes:

- Development Team members
 - Tasking client
 - Original task or subject
 - Purpose of development
 - Ratings affected
 - Target audience
 - If a Course was identified for the instructional requirement:
 - Course title and its objective
 - Each Module title and its objective
 - Each RLO and its terminal objective for the Module selected for development
 - If a Module was identified for the instructional requirement:
 - Module title and its objective
 - Each RLO and its terminal objective for the Module selected for development
 - If a Standalone RLO was identified for the instructional requirement:
 - RLO title and its terminal objective
 - Safety Review requirements
-

The Analysis Document includes:

- Each RLO title and its terminal objective
- Prerequisites identified for the RLO
- Each RIO and its enabling objective
- Each RIO type
- Safety Review requirements
- References and resources for each RLO

A blank Reusable Learning Object Analysis Document and Cover Sheet can be found in **Appendix 6.1**. **Appendix 6.2** contains a sample completed Reusable Learning Object Analysis Document and Cover Sheet. **Appendix 6.3** contains an Analysis Review Job Aid that can be used to help ensure that all steps in the Analysis Phase have been completed.

4.2.2.6 POA&M Update

Upon completion of the Reusable Learning Object Analysis Document, the POA&M that was developed in the Planning Phase is updated and refined.

4.2.3 Analysis Review

In this sub-phase, a peer review team analyzes the Reusable Learning Object Analysis Document and Cover Sheet and presents any concerns about the project design to the Development Team. The goal of this review is to detect any problems in the overall design of the RLOs and RIOs that have been identified for development and to ensure that these RLOs and RIOs will teach the selected instructional unit. Any annotated discrepancies are resolved prior to entering the Design Phase. Use the Analysis Review Job Aid in **Appendix 6.3** to ensure that all steps in the Analysis Phase have been completed and that required information appears on the Reusable Learning Object Analysis Document and Cover Sheet.

4.3 RLO Process Model Phase 3: Design

Introduction

The Design Phase provides the framework for the development of successful instruction. The accuracy and thoroughness of this phase help ensure that an appropriate learning experience will be developed in subsequent phases. The Design Phase contains both the Design of RIO Components sub-phase and the Design Review sub-phase. The Development Team completes the Design Phase by producing the Design Phase Packet.

4.3.1 Design of RIO Components

In this sub-phase, the five to nine (7 ± 2) RIOs contained in each RLO are designed and sequenced. All components for each RIO are designed, and graphic media elements are ordered. Required information for the development of each RIO is contained in its individual RIO Packet.

4.3.1.1 RIO Cover Sheet Completion

For each RIO, a Cover Sheet is created and becomes the first page of each RIO Packet. The RIO Cover Sheet contains the following information.

- RLO title
- RIO title
- RIO objective
- RIO type

The RIO Packet Cover Sheet is contained in **Appendix 6.4**.

4.3.1.2 Group RIO Content Review

Before the design of each specific RIO begins, identified content needs to be reviewed to identify content commonalities. Once identified, these commonalities should be merged or deleted to prevent the development of redundant instruction.

4.3.1.3 Metadata and Search Keys

Metadata are terms accompanying data components of the instruction that identify their type and function.

- Metadata provides information about the Course, Module, RLO, RIO, and graphic media.
 - Metadata is developed for each instructional item.
 - Metadata guidelines in *Navy E-Learning Content Technical Specifications* should be followed.
-

Search keys, or keywords, are words that are used to describe key points for your instructional item. They serve the same purpose as search keys, or keywords, used by search engines for Internet searches. Search keys, or keywords are:

- Created for each instructional item.
- Used by developers and SMEs to search for existing content and graphic media to reuse or repurpose in later development projects.

In the Design Phase, create and enter search keys, or keywords, and metadata for:

- Course, if applicable
 - Module, if applicable
 - RLO(s)
 - RLOs
-

4.3.1.4 Interaction Items

Interaction items within the body of a RLO provide learners with an opportunity to practice learned information, while providing them with reinforcement and feedback.

- Storyboard interactions.
 - Assign reference sources to interactions, if applicable.
-

4.3.1.5 Graphic Media Needs

Graphic media is used as one instructional strategy to support and enhance the instruction contained in the RLO.

- Develop naming schema for graphics.
 - Determine required graphic media.
 - May be graphics, video, or animation.
 - Be interesting, creative, and motivational with media selection.
 - Search for existing graphic media.
 - Create information needed by graphics support personnel to begin production and development of graphic media for RLO.
 - Storyboard graphic media.
 - Avoid copyright and distribution issues – if in doubt, LEAVE IT OUT.
 - Assign reference sources to media objects, if applicable.
 - Order original and repurposed graphic media.
-

4.3.1.6**Alternate Output Elements**

In an Integrated Learning Environment, different or multiple delivery strategies may be used to present various portions of the instructional content. In the Design Phase, alternate forms of output need to be identified and designed. Based on the delivery strategy identified, instructional elements and different media formats may need to be designed. These items may include:

- Multiple media outputs
- Instructor notes
- Print graphics
- Paper-based assignments
- Alternate tables

4.3.1.7**Practice and Assessment Items**

Practice items for each RIO are included within the RIO and are designed to provide the learners with opportunities to practice their learning. Assessment items for all RIOs in an RLO are grouped and appear in the Pretest and Quiz portions of the RLO. Follow the standards guidelines found in *Navy Reusable Learning Object (RLO) Content Development Guidelines* when creating these items.

4.3.1.8**Content Structure in Tool**

In the Design Phase, the content structure is established in the tool. All titles for identified instructional items should be entered into the tool. Any metadata and search keys, or keywords, not previously entered must be entered to establish an accurate content structure.

4.3.1.9**Review and Reviewer Designations**

Upon completion of the Design Phase, each RLO component and all RIOs must be reviewed to ensure that the information is accurate and complete, is instructionally sound, and conforms to the standards guidelines in *Navy Reusable Learning Object (RLO) Content Development Guidelines*. If Safety Reviews were identified in the Analysis Phase, these reviews must be arranged. All reviews and the required reviewers are identified in this phase.

4.3.1.10**POA&M Update**

Upon completion of the Design Phase the POA&M that was developed in the Planning Phase is further revised.

4.3.1.11 Design Phase Packet Completion

The final step in the Design Phase is the completion of the Design Phase Packet. This packet establishes the framework for development. Once development begins, some changes may need to be made to the structure and arrangement of the RLOs and RIOs. The Design Phase Packet includes:

- Reusable Learning Object Analysis Document Cover Sheet
- Reusable Learning Object Analysis Document
- Revised POA&M
- List containing metadata and search keys for
 - Course, if applicable
 - Module, if applicable
 - RLO(s)
 - RIOs
- Naming schema for media and external imports
- Required reviews and reviewers
- RIO Packets
 - Cover sheet
 - Outline of RIO content items for RLOs
 - Practice items
 - Assessment items
 - Interaction storyboards for each RIO, if applicable
 - Identified media needs

A sample RIO Packets for one RLO can be found in **Appendix 6.6**. Use the Design Review Job Aid in **Appendix 6.5** to help ensure that your Design Phase Packet is complete.

4.3.2 Design Review

In this sub-phase, a peer review team analysis ensures that all steps in the Design Phase have been completed. The goal of this step is to detect any problems in the overall design of the RLOs and RIOs that have been identified for development and to ensure that these RLOs and RIOs will teach the selected task or topic. Use the Design Review Job Aid in **Appendix 6.5** to help ensure that the Design Phase Packet is complete.

- Analyze Design Phase Packet.
 - Verify metadata and search keys, or keywords, in the tool.
 - Discuss discrepancies with the Development Team.
 - Revisions are completed as warranted.
-

4.4 RLO Process Model Phase 4: Development

Introduction

During the Development Phase, the RLO components and RLOs that will be presented to the learners are created, evaluated, and revised. The content items, interactions, and graphic media are developed during this phase. Three review processes follow the initial product development. Even though the development of the RLO components and RLOs are addressed in separate sub-phases, these items may be developed concurrently. When developing RLOs and RLOs, refer to the specifications in *Navy Reusable Learning Object (RLO) Content Development Guidelines*. The Development Phase is completed by the Development Team, with graphics support.

4.4.1 Development of RLO Components

In this sub-phase, the Overview and Summary components of the RLO are developed. An RLO is created by combining an Overview, Pretest, five to nine (7 ± 2) RLOs, Summary, and Quiz. Each RLO component is developed using structured guidelines and is entered into the tool.

RLO Components The table lists all components of an RLO and the content items contained in each component.

RLO COMPONENT	CONTENT ITEMS
RLO Overview	<ul style="list-style-type: none">• Introduction• Importance• Objective• Prerequisites• Scenario• Outline
RLO Pretest (Assessment)	Assessment items for each RIO. All assessment items are pooled in the RLO. (Created in Design Phase.)
RLOs	5 to 9 RLOs
RLO Summary	<ul style="list-style-type: none">• Review• Next Steps• Additional Resources
RLO Quiz (Assessment)	Assessment items for each RIO. All assessment items are pooled in the RLO. (Created in Design Phase.)

4.4.2 Development of RIOs	In this sub-phase, the content items for the five to nine (7 ± 2) RIOs contained in each RLO are developed using structured guidelines. All information contained in each RIO Packet is used in the Development Phase.
4.4.2.1 RIO Content Items	<p>Each different RIO type has required content items that must be developed using <i>Navy Reusable Learning Object (RLO) Content Development Guidelines</i>. Refer to this document to determine the content items required for the RIO being developed. Content items:</p> <ul style="list-style-type: none">• Contain instructional information• May contain graphics• Contain required items specific to RIO types• May contain alternate output elements• May contain optional review items
4.4.2.2 Interaction Items	<p>Use storyboards from the Design Phase to develop interaction items.</p>
4.4.2.3 Tool Input	<p>All RIO items not previously entered into the tool are entered during this phase. The following items are included:</p> <ul style="list-style-type: none">• Content items• Practice items• Assessment items• Create Pretest and Quiz, if applicable• Interaction items• Optional review items• Alternate output elements• Additional metadata and search keys, or keywords, if needed
4.4.2.4 Graphic Media	<p>In the Design Phase, graphic media was designed and ordered from the graphics support personnel. During this phase:</p> <ul style="list-style-type: none">• Graphic media is imported into the tool.• Metadata for the graphic media is entered into the tool.• Additional graphic media needs should be identified and ordered.

4.4.2.5**External Content**

In some content development systems, External Content can be imported into the tool. If you are authoring content in one of these systems, all External Content should be imported during this phase.

4.4.3**Final
Development
Team Review**

In this sub-phase the Development Team performs a final review of the RLO in its entirety. Each RLO component and all RIOs are reviewed to ensure that the enabling learning objective for each RIO is met through the instruction and that the terminal learning objective for the RLO has been achieved. The following tasks should be accomplished in this team review.

- Ensure RIOs are in the correct instructional sequence.
 - Ensure the RLO and RIOs meet all guidelines in:
 - *Navy Reusable Learning Object (RLO) Content Development Guidelines*
 - *Navy E-Learning Content Technical Specifications*
 - Make modifications as needed.
 - Request RLO move to Peer Review Evaluation Phase.
-

4.4.4**Peer Review
Evaluation**

The Peer Review Evaluation is designed to ensure that the RLOs and RIOs that are developed using the Navy RLO Process Model conform to its standards. The SME reviewer checks to make sure all information is accurate, current, and complete; and two ISS reviewers check to ensure that the RLO components and RIOs are instructionally sound. The Evaluation Coordinator oversees this process. Peer Review Evaluations are completed and are used by the Development Team to implement changes. In the Peer Review Evaluation Process, the following steps occur.

- Evaluation Coordinator assigns SME(s) and ISSs to review the RLO.
 - Reviewers examine all RLO components and RIOs to ensure the RLO and RIOs meet all guidelines in:
 - *Navy Reusable Learning Object (RLO) Content Development Guidelines*
 - *Navy E-Learning Content Technical Specifications*
 - Reviewers document discrepancies.
 - Reviewers notify Evaluation Coordinator when evaluation is complete.
-

- Evaluation Coordinator notifies Development Team team leader that review is complete.
 - Development Team implements valid or controllable corrections.
 - Development Team team leader notes corrections made.
 - Development Team notifies Evaluation Coordinator that RLO is ready for Quality Assurance (QA) Evaluation.
 - Evaluation Coordinator reviews corrections made.
 - Evaluation Coordinator notifies QA Manager that RLO is ready for QA Evaluation.
-

4.4.5 Quality Assurance Evaluation

The Quality Assurance (QA) Evaluation is the final in-house review process before the RLO is placed on Navy E-Learning. The QA Manager oversees this process. The Development Team receives evaluation comments from the QA Evaluation and implements changes. The following steps occur in the QA Evaluation process.

- QA Manager assigns QA Review Team member to evaluate RLO.
 - QA Review Team member evaluates the RLO to ensure the RLO and RLOs meet all guidelines in:
 - *Navy Reusable Learning Object (RLO) Content Development Guidelines*
 - *Navy E-Learning Content Technical Specifications*
 - QA Review Team member documents discrepancies.
 - QA Review Team member notifies QA Manager that evaluation is complete.
 - QA Manager reviews evaluation comments and contacts Development Team team leader.
 - Development Team team leader reviews QA evaluation comments.
 - Development Team implements valid or controllable corrections.
 - Development Team team leader notifies QA Manager of completion of changes.
 - QA Manager/QA Team reviews changes.
 - QA Manager works with Development Team to finalize RLO.
 - QA Manager institutes notification of product completion.
-

4.5 RLO Process Model Phase 5: Implementation

Introduction During this phase, the RLOs and RLOs will be utilized by the learners through the Navy E-Learning website. The Implementation Phase is completed by the Implementation Team.

Navy E-Learning The Navy E-Learning site provides training opportunities anytime, anywhere in the world.

- Access from www.navylearning.navy.mil or www.navylearning.com
 - Updates course completion information in your “Learning Plan” and “Record of Progress.”
 - Launches courses (RLOs) from “My Learning Plan” page.
 - Updates completed courses and in progress courses in “Record of Progress” section of “My Learning Plan.”
-

4.6 RLO Process Model Phase 6: Evaluation

Introduction Following implementation, formative and summative evaluations will be conducted to evaluate the RLOs. These evaluations are designed to improve the RLOs and determine their effectiveness. The Evaluation Phase is completed by the Evaluation Team.

4.6.1 Formative Evaluation The formative evaluation focuses on the improvement of the RLO product.

Formative evaluations:

- Relate to the revision of the RLO.
 - Are conducted with small groups from the target audience or as field trials.
 - Collect information about the:
 - Quality
 - Characteristics
 - Usability
 - Desirable and undesirable features of the product
 - Focus on RLO improvement.
-

**4.6.2
Summative
Evaluation**

The summative evaluation focuses on the effectiveness of the RLO.

Summative evaluations:

- Answer questions related to effectiveness of RLOs and the RLO to teach the defined learning objectives.
 - Are conducted after the RLO is being used actively by the target audience.
 - Compare Pretest and Quiz grades.
 - May measure whether learning has affected job performance.
-

5.0 Additional Resources

Additional Resources The following is a list of resources that provides background information on the RLO Model:

Cisco Systems Inc., *Reusable Learning Object Strategy: Designing Information and Learning Objects Through Concept, fact, procedure, Process, and Principle Templates*, version 4.0, November 2001.

Clark, R.C., *Developing Technical Training: A Structured Approach for the Development of Classroom and Computer-Based Instructional Materials*, Performance Technology Press, 1999.

Clark, R.C. & Mayer, R.E., *E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning*, Jossey-Bass Pfeiffer, 2002.

Navy E-Learning Content Technical Specifications, Naval Education and Training Command , Pensacola, FL, January 2002. Online:
[http://www.navylearning.com/cnetdoc/Content_Tech_Spec3.pdf]

Navy Reusable Learning Object (RLO) Content Development Guidelines, Naval Education and Training Professional Development and Training Center, Pensacola, FL, February 2003. Online:
[http://www.navylearning.com/cnetdoc/rlo_dev_guidelines.pdf]

The Gregg Reference Manual, Ninth ed. Glencoe/McGraw-Hill, New York, NY, 2001.

United States Government Printing Office Style Manual, United States Government Printing Office, Washington, DC, 2000.

Appendix 6.1 – Reusable Learning Object Analysis Document and Cover Sheet

Reusable Learning Object Analysis Document Cover Sheet

This document applies to the analysis of a (check one of the following by double clicking on the box and selecting “checked”):

- ☐ Multi-Module Course (*complete sections A-D below*)
☐ Single Module (containing multiple RLOs) (*complete sections A, C, & D below*)
☐ Standalone RLO (*complete sections A & D below*)

Section A.

Development Team (Identify Team Lead with an asterisk)			
SME(s)			
ISS(s)			
Tasking			
Tasking Client			
Original Task or Subject			
Purpose of Development			
Ratings Affected			
Target Audience (Check all that apply)*	<input type="checkbox"/> Civilian Employees <input type="checkbox"/> Dependants	<input type="checkbox"/> Enlisted Personnel <input type="checkbox"/> Officers	<input type="checkbox"/> Reservists <input type="checkbox"/> Retirees

Section B. In the table below, identify the Course for which this document applies.

Course Title	Course Objective

Section C.

For Single Modules: Identify the Title and Objective of the module for which this document applies in the row labeled 1 and check the box in the column labeled development.

For Multi-Module Courses: Identify the Module Titles and Objectives contained in the Course for which this document applies. Because it is only necessary to prepare one Module at a time, check the box in the Development column by the Module for which this document applies. Add to or remove rows from this table as needed.

Module #	Module Title	Module Objective	Development
1			<input type="checkbox"/>
2			<input type="checkbox"/>
3			<input type="checkbox"/>

Section D.

For Standalone RLOs: Identify the Title and Objective of the RLO for which this document applies in the row labeled 1 and check the box in the development column. Remove rows from this table as needed.

For single Modules AND Multi-Module Courses: Identify all RLO Titles and Objectives contained in the Module for which this document applies. Add to or remove rows from this table as needed. Occasionally only one RLO in a Module will be developed at a time. If this document represents the analysis of only one RLO, check the box in the column labeled development by the RLO represented.

(Note for all RLOs: Check the box in the column labeled Safety for each RLO that contains RLOs requiring a Safety Review.)

RLO#	RLO Title	RLO Objective	Safety	Development
1			<input type="checkbox"/>	<input type="checkbox"/>
2			<input type="checkbox"/>	<input type="checkbox"/>
3			<input type="checkbox"/>	<input type="checkbox"/>
4			<input type="checkbox"/>	<input type="checkbox"/>

5			<input type="checkbox"/>	<input type="checkbox"/>
6			<input type="checkbox"/>	<input type="checkbox"/>
7			<input type="checkbox"/>	<input type="checkbox"/>
8			<input type="checkbox"/>	<input type="checkbox"/>
9			<input type="checkbox"/>	<input type="checkbox"/>

Reusable Learning Object Analysis Document

For each RLO for which this document applies, fill out the following table. For documents applying to Modules, number RLOs according to the way they appear on the cover sheet of this document. Copy, paste, and delete this table as needed.

RLO # <u> </u>	<i>(Note: RLO Title and Objective must be entered on the Cover Sheet of this document)</i>			
RLO Title:				
RLO Objective:				
Prerequisites:				
Delivery Outputs (Check all that apply):	<input type="checkbox"/> Web <input type="checkbox"/> CD <input type="checkbox"/> Print <input type="checkbox"/> PDA <input type="checkbox"/> Presentation			
RIO #	RIO Title	RIO Type	RIO Enabling Objective	Safety
1				<input type="checkbox"/>
	Comments:			
2				<input type="checkbox"/>
	Comments:			
3				<input type="checkbox"/>
	Comments:			
4				<input type="checkbox"/>
	Comments:			
5				<input type="checkbox"/>
	Comments:			
6				<input type="checkbox"/>
	Comments:			
7				<input type="checkbox"/>
	Comments:			
8				<input type="checkbox"/>
	Comments:			
9				<input type="checkbox"/>
	Comments:			
References & Resources:				
#	Name of Reference or Resource	RIOs	Comments	
1				
2				
3				
4				
Comments:				

Appendix 6.2 – Reusable Learning Object Analysis Document and Cover Sheet (Completed)

Reusable Learning Object Analysis Document Cover Sheet

This document applies to the analysis of a (check one of the following by double clicking on the box and selecting “checked”):

- ☒ Multi-Module Course (*complete sections A-D below*)
☐ Single Module (containing multiple RLOs) (*complete sections A, C, & D below*)
☐ Standalone RLO (*complete sections A & D below*)

Section A.

Development Team (Identify Team Lead with an asterisk)	
SME(s)	HMCM Roy Smuckatelli, HMCS Fester Lilliputian
ISS(s)	Charles Hancock, Susann O'Malley*, David Dorchester, Joyce Jolly, Mary Lou Cinnamon
Tasking	
Tasking Client	NAC
Original Task or Subject	Emergency Medical Care Procedures for a Hospital Corpsman
Purpose of Development	Produce an e-learning supplement to the Hospital Corpsman NRTC on Emergency Medical Care procedures.
Ratings Affected	HM, DT
Target Audience (Check all that apply)*	<input checked="" type="checkbox"/> Civilian Employees <input checked="" type="checkbox"/> Enlisted Personnel <input checked="" type="checkbox"/> Reservists <input checked="" type="checkbox"/> Dependants <input checked="" type="checkbox"/> Officers <input checked="" type="checkbox"/> Retirees

Section B. In the table below, identify the Course for which this document applies.

Course Title	Course Objective
Emergency Medical Care Procedures	After completing this course, you will be able to render appropriate emergency aid to victims in the field.

Section C.

For Single Modules: Identify the Title and Objective of the module for which this document applies in the row labeled 1 and check the box in the column labeled development.

For Multi-Module Courses: Identify the Module Titles and Objectives contained in the Course for which this document applies. Because it is only necessary to prepare one Module at a time, check the box in the Development column by the Module for which this document applies. Add to or remove rows from this table as needed.

Module #	Module Title	Module Objective	Development
1	General First Aid	After completing this module, you will be able to recall general first aid techniques.	<input type="checkbox"/>
2	Patient assessment in the field	After completing this module, you will be able to recognize the assessment sequence for emergency medical care in the field.	<input type="checkbox"/>
3	Basic Life Support	After completing this module, you will be able to recall basic life support techniques for upper airway obstruction, respiratory failure, and cardiac arrest.	<input checked="" type="checkbox"/>
4	Injuries	After completing this module, you will be able to recognize types of injuries and determine management and treatment procedures for each type of injury.	<input type="checkbox"/>

5	Common medical emergencies	After completing this module, you will be able to choose the appropriate treatment and management techniques for the common medical emergencies.	<input type="checkbox"/>
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Section D.

For Standalone RLOs: Identify the Title and Objective of the RLO for which this document applies in the row labeled 1 and check the box in the development column. Remove rows from this table as needed.

For single Modules AND Multi-Module Courses: Identify all RLO Titles and Objectives contained in the Module for which this document applies. Add to or remove rows from this table as needed. Occasionally only one RLO in a Module will be developed at a time. If this document represents the analysis of only one RLO, check the box in the column labeled development by the RLO represented.

(Note for all RLOs: Check the box in the column labeled Safety for each RLO that contains RLOs requiring a Safety Review.)

RLO#	RLO Title	RLO Objective	Safety	Development
1	Assessing Airway Obstructions	After completing this lesson, you will be able to identify the process for assessing an airway obstruction.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Choosing a Nonsurgical Method for Clearing an Airway Obstruction	After completing this lesson, you will be able to identify the process for determining the appropriate nonsurgical method for clearing an airway obstruction.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Nonsurgical Methods for Clearing an Airway Obstruction	After completing this lesson, you will be able to identify the nonsurgical methods for clearing an airway obstruction.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Methods of Artificial Ventilation	After completing this lesson, you will be able to recall the steps in the techniques for artificial ventilation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Cardiopulmonary Resuscitation	After completing this lesson, you will be able to recall the steps involved in one and two rescuer CPR for adults, children and infants.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Shock	After completing this lesson, you will be able to recall the symptoms and treatment for shock.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reusable Learning Object Analysis Document

For each RLO for which this document applies, fill out the following table. For documents applying to Modules, number RLOs according to the way they appear on the cover sheet of this document. Copy, paste, and delete this table as needed.

RLO # 3	<i>(Note: RLO Title and Objective must be entered on the Cover Sheet of this document)</i>			
RLO Title:	Nonsurgical Methods for Clearing an Airway Obstruction			
RLO Objective:	After completing this lesson, you will be able to identify the nonsurgical methods for clearing an airway obstruction.			
Prerequisites:	Basic first aid, upper respiratory anatomy			
Delivery Outputs (Check all that apply):	<input checked="" type="checkbox"/> Web <input checked="" type="checkbox"/> CD <input checked="" type="checkbox"/> Print <input type="checkbox"/> PDA <input type="checkbox"/> Presentation			
RIO #	RIO Title	RIO Type	RIO Enabling Objective	Safety
1	How to Reposition a Victim	Procedure	After completing this topic, you will be able to identify the steps for repositioning a victim.	<input checked="" type="checkbox"/>
	Comments:			
2	How to Perform the Head Tilt-Chin Lift Maneuver	Procedure	After completing this topic, you will be able to identify the steps in the head tilt-chin lift maneuver.	<input checked="" type="checkbox"/>
	Comments:			
3	How to Perform the Jaw Thrust Maneuver	Procedure	After completing this topic, you will be able to identify the steps in the jaw thrust maneuver.	<input checked="" type="checkbox"/>
	Comments:			
4	How to Perform an Abdominal Thrust with the Victim Standing or Sitting	Procedure	After completing this topic, you will be able to identify the steps for performing an abdominal thrust with the victim standing or sitting.	<input checked="" type="checkbox"/>
	Comments:			
5	How to Perform an Abdominal Thrust with the Victim Lying Down	Procedure	After completing this topic, you will be able to identify the steps for performing an abdominal thrust with the victim lying down.	<input checked="" type="checkbox"/>
	Comments:			
6	How to Perform a Chest Thrust with the Victim Standing or Sitting	Procedure	After completing this topic, you will be able to identify the steps for performing a chest thrust with the victim standing or sitting.	<input checked="" type="checkbox"/>
	Comments:			
7	How to Perform a Chest Thrust with the Victim Lying Down	Procedure	After completing this topic, you will be able to identify the steps for performing a chest thrust with the victim lying down.	<input checked="" type="checkbox"/>
	Comments:			

References & Resources:			
#	Name of Reference or Resource	RIOs	Comments
1	Brady Emergency Care, Eighth Edition	6, 7	This manual offers a simple explanation of chest injuries.
2	Hospital Corpsman, NAVEDTRA 14295	1, 2, 3, 4, 5,	This Navy NRTC provides basic information on first-response requirements
3	Recognition and Management of Acute Respiratory Conditions (CD-ROM), Naval School of Health Sciences	1, 6, 7	This interactive CD-ROM provides an overview of the content (Introduction) and two major sections (Tutorial and Challenges).
4	Virtual Naval Hospital, www.vnh.org	6, 7	This Web source is a service of the U.S. Navy Bureau of Medicine and Surgery
Comments:			

Appendix 6.3 Analysis Review Job Aid

Analysis Review Job Aid

Check, to ensure that each of the following have been completed during the Analysis Phase and are stated on the Reusable Learning Object Analysis Document and Cover Sheet.	Yes	No
1) Development team and team leader have been identified.		
2) Tasking client has been identified.		
3) Original task or subject has been identified.		
4) Purpose for the development of the training has been identified.		
5) Ratings that will be affected by training have been identified.		
6) Target audience has been identified.		
7) Course title stated. (if applicable)		
8) Course objective stated. (if applicable)		
9) Module title(s) stated. (if applicable)		
10) Module objective(s) stated. (if applicable)		
12) RLO title(s) stated correctly. [as per: <i>Navy Reusable Learning Object (RLO) Content Development Guidelines</i>]		
13) RLO objective(s) stated correctly. [as per: <i>Navy Reusable Learning Object (RLO) Content Development Guidelines</i>]		
14) Prerequisites identified for the RLO		
15) Output type(s) specified for RLO		
16) RIO title stated correctly. [as per: <i>Navy Reusable Learning Object (RLO) Content Development Guidelines</i>]		
17) RIO objectives stated correctly. [as per: <i>Navy Reusable Learning Object (RLO) Content Development Guidelines</i>]		
18) RIO type identified		
19) RLO objective(s) supported by the subordinate RIO objectives.		
20) Safety Review Requirements identified for appropriate RIO(s).		
21) Resources and references identified for each RLO		

Appendix 6.4 – RIO Packet Cover Sheet

RIO Packet Cover Sheet

RLO Title:

RIO Title:

RIO Objective:

RIO Type:

Appendix 6.5 – Design Review Job Aid

Design Review Job Aid

Check to ensure that the Design Phase Packet contains the following items.		Yes	No
1) Reusable Learning Object Analysis Document Cover Sheet			
2) Reusable Learning Object Analysis Document			
3) Revised POA&M			
4) Metadata and search keys for the Course (if applicable) [as per: <i>Navy E- Learning Content Technical Specifications</i>] [If training is being developed, using computerized authoring tools metadata should be entered into and reviewed with in the authoring tool.]			
5) Metadata and search keys for the Module (if applicable) [as per: <i>Navy E- Learning Content Technical Specifications</i>] [If training is being developed, using computerized authoring tools metadata should be entered into and reviewed with in the authoring tool.]			
6) Metadata and search keys for RLO(s) [as per: <i>Navy E- Learning Content Technical Specifications</i>] If training is being developed, using computerized authoring tools metadata should be entered into and reviewed with in the authoring tool.]			
7) Metadata and search keys for RIOs			
8) Naming schema for media and external imports			
9) RIO Packet			
	9a) Cover sheet for each RIO (must have RLO title, RIO title, RIO objective and RIO type)		
	9b) Outline of RIO content items for each RIO		
	9c) Practice items for each RIO		
	9d) Assessment items for each RIO		
	9e) Interaction story boards for each RIO (if applicable)		
	9f) Media needs identified for each RIO		
	9g) References used for each RIO		
10) Identify individuals to conduct SME review and Safety Review.			

Appendix 6.6 – Sample RIO Packets

RIO 1 Packet Cover Sheet

RLO Title: Nonsurgical Methods for Clearing an Airway Obstruction

RIO Title: How to Reposition a Victim

RIO Objective: After completing this topic, you will be able to identify the steps for repositioning a victim.

RIO Type: Procedure

RIO 1 Content Items

RIO 1 : *How to Reposition a Victim* (Procedure)

Search Keys: repositioning, positioning, adequate breathing, airway obstruction, airway intervention, breathing, choking, Heimlich maneuver, open airway, respiration, upper airway

Metadata: Copyright (No), Unclassified, Version 1, Safety (Yes)

Introduction:

Text: A brief discussion on the need to reposition victims in order to open an airway

Graphic:

A photo of victim lying on their stomach.

Warnings:

Message Box: Warning Spinal injury and moving victim

Message Box: Warning Dental appliances.

Steps: (step action table or slide show)

Step Action Table or Slide show: Details on the four steps for repositioning victim. Table (Print) Slide show (e-learning)

Graphics:

Graphic
Step one

Graphic
Step two

Graphic
Step three

Graphic
Step four

Interaction:

Drag and Drop: for e-learning

Demonstration

Video: Video of victim being repositioned

Practice:

Multiple Choice Single Answer:

What is the third step in repositioning a victim?

A) Roll patient onto back and reposition extended arm. When patient is supine with arms alongside the body, position yourself at patient's side

B) Kneel to side of victim in line with victim's shoulders, but far enough away so victim's body will not touch yours when rolled toward you.

* C) Pull patient toward you while keeping head and neck in a natural straight line with the back and rest patient's head on extended arm.

D) Support back of victim's head with one hand while reaching over with other hand to grasp under distant armpit.

Assessment

Multiple Choice Single Answer:

What is the first step in repositioning a victim?

A) Roll patient onto back and reposition extended arm. When patient is supine with arms alongside the body, position yourself at patient's side

* B) Kneel to side of victim in line with victim's shoulders, but far enough away so victim's body will not touch yours when rolled toward you.

C) Pull patient toward you while keeping head and neck in a natural straight line with the back and rest patient's head on extended arm.

D) Support back of victim's head with one hand while reaching over with other hand to grasp under distant armpit.

Multiple Choice Single Answer:

What is the fourth step in repositioning a victim?

* A) Roll patient onto back and reposition extended arm. When patient is supine with arms alongside the body, position yourself at patient's side

B) Kneel to side of victim in line with victim's shoulders, but far enough away so victim's body will not touch yours when rolled toward you.

C) Pull patient toward you while keeping head and neck in a natural straight line with the back and rest patient's head on extended arm.

D) Support back of victim's head with one hand while reaching over with other hand to grasp under distant armpit.

Ordering:

You need to reposition a victim in order to open an airway. Put the following steps in the proper order for repositioning a victim.

1) Kneel to side of victim in line with victim's shoulders, but far enough away so victim's body will not touch yours when rolled toward you. Straighten the victim's leg, gently but quickly. Move victim's closer arm along floor until it reaches straight out past the head.

2) Support back of victim's head with one hand while reaching over with other hand to grasp under distant armpit

3) Pull patient toward you while keeping head and neck in a natural straight line with the back. Rest patient's head on extended arm.

- 4) Roll patient onto back and reposition extended arm. When patient is supine with arms alongside the body, position yourself at patient's side.

References

Hospital Corpsman, NAVEDTRA 14295: This Navy nonresident training course provides basic information on first-response requirements in both military and civilian settings. Chapter 4

RIO 2 Packet Cover Sheet

RLO Title: Nonsurgical Methods for Clearing an Airway Obstruction

RIO Title: How to Perform the Heat Tilt-Chin Lift Maneuver

RIO Objective: After completing this topic, you will be able to identify the steps in the head tilt-chin lift maneuver.

RIO Type: Procedure

RIO 2 Content Items

RIO 2 : *How to Perform the Head Tilt-Chin Lift Maneuver* (Procedure)

Search Keys: adequate breathing, airway obstruction, airway intervention, breathing, choking, Heimlich maneuver, open airway, respiration, upper airway, head tilt, chin lift, jaw thrust

Metadata: Copyright (No), Unclassified, Version 1, Safety (Yes)

Introduction:

Text: A brief discussion on the head tilt maneuver.

Warnings:

Message Box: Spinal injury warning

Message Box: Dental appliances warning.

Steps: (step action table)

Graphic:

Graphic showing the head tilt –chin lift maneuver

Step Action Table: Table detailing the three steps in the head tilt chin lift maneuver.

Message box: Warning about not putting too much pressure on the soft tissue under the chin.

Practice:

Ordering:

You are performing the head tilt-chin lift maneuver to open an airway obstructed by the patient's tongue. Put the following steps in the proper order of procedure.

- 1) Place one of your hands on the patient's forehead
- 2) Apply gentle, firm, backward pressure, using palm of your hand.
- 3) Place fingers of other hand under bony part of chin.
- 4) Lift the chin forward

Assessment:

Multiple Choice Single Answer:

Of the following maneuvers, which is considered the primary method for opening an obstructed airway?

- a) The jaw-thrust maneuver
- b) The Heimlich Maneuver

- c) The head tilt-chin lift maneuver
- d) The abdominal thrust maneuver

Multiple Choice Single Answer:

If a head or spinal injury is suspected, which of the following maneuvers should be used to open an obstructed airway?

- a) The jaw-thrust maneuver
- b) The Heimlich Maneuver
- c) The head tilt-chin lift maneuver
- d) The abdominal thrust maneuver

References

Hospital Corpsman, NAVEDTRA 14295: This Navy nonresident training course provides basic information on first-response requirements in both military and civilian settings. Chapter 4

RIO 3 Packet Cover Sheet

RLO Title: Nonsurgical Methods for Clearing an Airway Obstruction

RIO Title: How to Perform the Jaw Thrust Maneuver

RIO Objective: After completing this topic, you will be able to identify the steps in the jaw thrust maneuver.

RIO Type: Procedure

RIO 3 Content Items

RIO 3 : *How to Perform the Jaw Thrust Maneuver* (Procedure)

Search Keys: adequate breathing, airway obstruction, airway intervention, breathing, choking, Heimlich maneuver, open airway, respiration, upper airway, jaw thrust, head tilt

Metadata: Copyright (No), Unclassified, Version 1, Safety (Yes)

Introduction:

Text: A brief discussion on the Jaw thrust maneuver.

Message Box: Warning Spinal injury warning

Steps: (Step action table)

Graphic:

Graphic showing the jaw thrust maneuver

Step Action Table: Table detailing the three steps in the jaw thrust maneuver.

Message box: Caution about not putting too much pressure could cause pain to victim

Demonstration:

Video: Video of jaw thrust maneuver.

Practice:

True/False

In the case of a cervical spine injury, the jaw-thrust maneuver can be modified by keeping the victim's head in a neutral position.

- a) True
- b) False

Assessment:

Multiple Choice Single Answer

Which of the following phrase best describes the jaw thrust maneuver?

- a) Primary method for opening an obstructed airway
- b) Alternate method for opening an obstructed airway
- c) Method of opening an obstructed airway for an unconscious victim
- d) Method of opening an obstructed airway for a conscious victim

Ordering:

You are performing the jaw thrust maneuver to open an airway obstructed by the patient's tongue. Put the following steps in the proper order of procedure.

- 1) Kneel near the top of victim's head.
- 2) Grasp the angles of the patient's lower jaw.
- 3) Lift with both hands, one on each side.

References

Hospital Corpsman, NAVEDTRA 14295: This Navy nonresident training course provides basic information on first-response requirements in both military and civilian settings. Chapter 4

RIO 4 Packet Cover Sheet

RLO Title: Nonsurgical Methods for Clearing an Airway Obstruction

RIO Title: How to Perform an Abdominal Thrust with the Victim Standing or Sitting

RIO Objective: After completing this topic, you will be able to identify the steps for performing an abdominal thrust with the victim standing or sitting.

RIO Type: Procedure

RIO 4 Content Items

RIO 4 : *How to Perform an Abdominal Thrust with the Victim Standing or Sitting* (Procedure)

Search Keys: adequate breathing, airway obstruction, airway intervention, breathing, choking, Heimlich maneuver, open airway, respiration, upper airway, abdominal thrust, conscious victim, sitting, standing

Metadata: Copyright (No), Unclassified, Version 1, Safety (Yes)

Introduction:

Text: A brief discussion on abdominal thrusts.

Warnings:

Message Box: Warning about possible damage to internal organs or breaking the sternum

Steps: (step action table)

Graphics:

Graphic of abdominal thrust victim standing

Step Action Table: Table detailing the five steps for abdominal thrust with victim standing.

Message Box: about hands being positioned on midline of body

Demonstration

Video: abdominal thrust victim standing

Interaction:

Ordering : Place the steps for abdominal thrust in the correct order.

Practice:

Multiple Choice Multiple Answer:

Which of the following are steps for performing abdominal thrusts with victims that are standing?

(More than one answer may be checked)

- a) *Make a fist with one hand.
- b) *Grasp fist with other hand and press fist into victim's abdomen
- c) *Place the thumb side of fist against victim's abdomen, in the midline, slightly above navel, and well below the tip of the xiphoid process
- d) Place victim in a supine position.

Assessment

True False

Damage to internal organs can be caused by abdominal thrusts if your hands are improperly placed.

*True

False

Multiple Choice Multiple Answer:

Which of the following are NOT steps for performing abdominal thrusts with victims that are standing?

(More than one answer may be checked)

- a) Make a fist with one hand.
- b) Grasp fist with other hand and press fist into victim's abdomen
- c) Place the thumb side of fist against victim's abdomen, in the midline, slightly above navel, and well below the tip of the xiphoid process
- d) *Place victim in a supine position.

References

Hospital Corpsman, NAVEDTRA 14295: This Navy nonresident training course provides basic information on first-response requirements in both military and civilian settings. Chapter 4

RIO 5 Packet Cover Sheet

RLO Title: Nonsurgical Methods for Clearing an Airway Obstruction

RIO Title: How to Perform an Abdominal Thrust with the Victim Lying Down

RIO Objective: After completing this topic, you will be able to identify the steps for performing an abdominal thrust with the victim lying down.

RIO Type: Procedure

RIO 5 Content Items

RIO 5 : *How to Perform an Abdominal Thrust with the Victim Lying Down* (Procedure)

Search Keys: adequate breathing, airway obstruction, airway intervention, breathing, choking, Heimlich maneuver, open airway, respiration, upper airway, abdominal thrust, unconscious victim, lying down

Metadata: Copyright (No), Unclassified, Version 1, Safety (Yes)

Introduction:

Text: A brief discussion on abdominal thrusts for victim lying down.

Warnings:

Message Box: Warning about possible damage to internal organs or breaking the sternum

Steps: (step action table)

Message box: repositioning victim

Graphic:

Graphic of abdominal thrust victim lying down

Step Action Table: Table detailing four steps for abdominal thrust with victim lying down.

Message Box: about hands being positioned on midline of body to insure thrust are on center of body.

Demonstration

Video: abdominal thrust victim lying down

Interaction:

Ordering: Place the steps for abdominal thrust for victim lying down in the correct order.

Manual Removal of Foreign Object:

Text: Description of removing foreign objects from unconscious victims.

Message Box: Warning unconscious victim

Message Box: Warning seizure victim

Finger Sweep:

Text: Brief discussion on when to use finger sweep.

Graphic:

Graphic of finger sweep




Table: Step action table detailing six steps for the finger sweep.

Demonstration:

Video: Video of finger sweep.

Interaction 2

Ordering: place the steps of the finger sweep in the correct order.

Practice:

Multiple Choice Single Answer

Which of the following is NOT a step in abdominal thrusts with an unconscious victim?

- a) Place the heel of one hand against victim's abdomen, in the midline, slightly above navel, and well below the tip of the xiphoid process.
- b) Place second hand directly on top of positioned hand, shoulders directly over patient's abdomen.
- c) Deliver 5 quick upward thrusts by pressing your hands inward and upward toward the diaphragm. Continue until the foreign body is
- d) *Place the heel of your hand on the lower portion of sternum. Lift and spread fingers.

Assessment:

Multiple Choice Multiple Answer:

Which of the following are steps in abdominal thrusts with an unconscious victim? (Check all that apply)

- a) Place the heel of one hand against victim's abdomen, in the midline, slightly above navel, and well below the tip of the xiphoid process.
- b) Place second hand directly on top of positioned hand, shoulders directly over patient's abdomen.
- c) Deliver 5 quick upward thrusts by pressing your hands inward and upward toward the diaphragm. Continue until the foreign body is
- d) *Place the heel of your hand on the lower portion of sternum. Lift and spread fingers.

True/False

When performing abdominal thrust on a victim lying down you should place your one hand on either side of the victims abdomen.

- a) True
- b) *False

References

Hospital Corpsman, NAVEDTRA 14295: This Navy nonresident training course provides basic information on first-response requirements in both military and civilian settings. Chapter 4

RIO 6 Packet Cover Sheet

RLO Title: Nonsurgical Methods for Clearing an Airway Obstruction

RIO Title: How to Perform a Chest Thrust with the Victim Standing or Sitting

RIO Objective: After completing this topic, you will be able to identify the steps for performing a chest thrust with the victim standing or sitting.

RIO Type: Procedure

RIO 6 Content Items

RIO 6 : *How to Perform a Chest Thrust with the Victim Standing or Sitting* (Procedure)

Search Keys: adequate breathing, airway obstruction, airway intervention, breathing, choking, Heimlich maneuver, open airway, respiration, upper airway, chest thrust, conscious victim, sitting, standing

Metadata: Copyright (No), Unclassified, Version 1, Safety (Yes)

Introduction:

Text: A brief discussion on chest thrusts and when they are used over abdominal thrusts.

Warning:

Message Box: Warning about breaking ribs, sternum, or xiphoid process

Glossary box: Definition for xiphoid process.

Steps:

Graphic:

Graphic of chest thrust with victim standing

Table: Step action table detailing three steps for performing chest thrust.

Interaction:

Ordering: Place the steps for performing the chest thrust I with victim standing in the correct order.

Practice:

True/False:

The chest thrust should only be used with markedly obese or pregnant victims.

a) *True

c) False

Assessment:

True/False

When performing the chest thrust you should place one hand on each side of the victim's rib cage.

a) True

b) *False

Multiple Choice Multiple Answer

Which of the following are steps when performing a chest thrust on a victim who is standing? (Check all that apply)

- a) *Stand behind the victim, with your arms directly under the victim's armpits.
- b) *Place the thumb side of your fist on the middle of victim's sternum.
- c) *Grab your fist with the other hand.
- d) *Perform five backward thrusts until the foreign body is expelled.

References

Brady Emergency Care, Eighth Edition: This manual offers a simple explanation of chest injuries.

Recognition and Management of Acute Respiratory Conditions (CD-ROM) Naval School of Health Sciences: This interactive CD-ROM provides an overview of the content (introduction) and two major sections (Tutorial and Challenges).

Virtual Naval Hospital, www.vnh.org: This Web source is a service of the U.S. Navy Bureau of Medicine and Surgery.

RIO 7 Packet Cover Sheet

RLO Title: Nonsurgical Methods for Clearing an Airway Obstruction

RIO Title: How to Perform a Chest Thrust with the Victim Lying Down

RIO Objective: After completing this topic, you will be able to identify the steps for performing a chest thrust with the victim lying down.

RIO Type: Procedure

RIO 7 Content Items

RIO 7 : *How to Perform a Chest Thrust with the Victim Lying Down* (Procedure)

Search Keys: adequate breathing, airway obstruction, airway intervention, breathing, choking, Heimlich maneuver, open airway, respiration, upper airway, chest thrust, unconscious victim, lying down

Metadata: Copyright (No), Unclassified, Version 1, Safety (Yes)

Introduction:

Text: A brief discussion on chest thrusts for victim lying down.

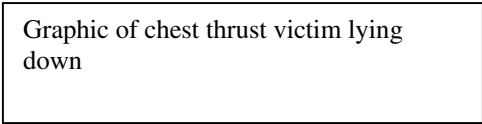
Warnings:

Message Box: Warning about possible damage to internal organs or breaking the sternum

Message Box: Warning about repositioning a victim

Steps: (step action table)

Graphic:



Graphic of chest thrust victim lying down

Table: step action table showing four steps for chest thrust with victim lying down.

Message Box: about hands being positioned on midline of body to insure thrust are on center of body.

Demonstration

Video: abdominal thrust victim lying down

Interaction:

Ordering: Place the steps for abdominal thrust for victim lying down in the correct order.

Manual Removal of Foreign Object:

Text: Description of removing foreign objects from unconscious victims.

Message Box: Unconscious victim

Message Box: Seizure victim

Finger Sweep:

Text: Brief discussion on when to use finger sweep.

Graphic:

Graphic of finger sweep

Table: Step action table detailing six steps for the finger sweep.

Demonstration:

Video: Video of finger sweep.

Interaction 2:

Ordering: place the steps of the finger sweep in the correct order.

Practice:

True /False

The chest thrust maneuver can be performed on an obese victim who is lying down and is unconscious.

- a) *True
- b) False

Assessment:

True/False

The chest thrust maneuver is dangerous because of the possibility of fracturing ribs, the sternum, or the xiphoid process.

- a) *True
- b) False

Multiple Choice Multiple Answers

Which victims are NOT candidates for the manual removal of foreign objects? (Choose all that apply.)

- a) Unconscious
- b) *Conscious
- c) *Seizure

Multiple Choice Multiple Answers

Which of the following types of reclining victims are candidates for the chest thrust maneuver? Choose all that apply.

- a) *Obese adult

- b) Thin adult
- c) *Late stage Pregnancy
- d) Child

References

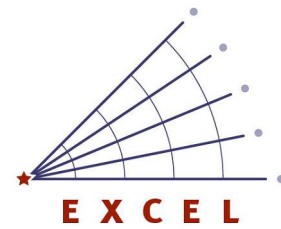
Brady Emergency Care, Eighth Edition: This manual offers a simple explanation of chest injuries.

Recognition and Management of Acute Respiratory Conditions (CD-ROM) Naval School of Health Sciences: This interactive CD-ROM provides an overview of the content (introduction) and two major sections (Tutorial and Challenges).

Virtual Naval Hospital, www.vnh.org: This Web source is a service of the U.S. Navy Bureau of Medicine and Surgery.

Appendix 6.7 - Glossary

5 Vector Model (5VM) – defines the perimeters around which Sailor's personal and professional development is designed. For more information on the 5VM, go to <http://www.excel.navy.mil/>. The 5 Vectors include Professional Development, Personal Development, Leadership, Qualifications & Certifications, and Performance.



Advanced Distributed Learning (ADL) – a collaborative effort between government, industry and academia to establish a new distributed learning environment that permits the interoperability of learning tools and course content on a global scale.

CISCO RLO Strategy – a model developed based on recognition of the need to move from creating and delivering large inflexible training courses, to database-driven objects that could be reused, searched, and modified independent of their delivery media.

Concept RIO - a type of RIO that is used when you want to teach a group of objects, symbols, ideas or events that are designated by a single word or term, share common features, and vary on irrelevant features

Database – a collection of information organized into interrelated tables of data and specifications of data objects.

Executive Review of Navy Training (ERNT) – Initiated by Adm. Vern Clark, a review that was directed to look at every aspect of training and education, to find out what the Navy was doing right, to find out what the Navy was doing wrong, to compare those findings to what is being done within industry to coordinate with experts in the fields of human performance, education management, psychology and organizational leadership to make a final recommendation.

Fact RIO - a type of RIO that is used when you want to teach unique, specific, one-of-a-kind pieces of information

Integrated Learning Environment (ILE) - a strategy that brings together the program management, functional, and technical integration of processes, products, and people involved in capturing, organizing, designing, validating, and deploying information or structured knowledge to the users in the right format and place at the time of need

Learning Management Systems (LMS) – enables the delivery, management, and administration of organization-wide learning to widely geographically and culturally diverse persons. A robust LMS provides a multitude of benefits to a large organization, including improving the speed and effectiveness of the training process and improving communication among and retention of employees. Providers of learning content can

access learning content, deliver online learning, and take advantage of multiple reporting capabilities. Managers can instantly view every user's progress and test results and take advantage of many management reports that the LMS can generate.

Learning Objectives – identify what the learner will be able to do after completing the lesson; relate to RIO type

Media – Webster's II: a specific type of artistic technique or means of expression as determined by the materials used or the creative methods employed. Media can be Graphics (.jpg, .gif, .png), Web pages, Video, or Audio.

Metadata – literally "data about data." This term refers to information about data itself perhaps the origin, size, formatting or other characteristics of a data item.

Navy RLO Process Model – a 6 phase guide for designing RLOs and RIOs that uses six instructional systems design phases; is based on the Cisco RLO Strategy, Merrill's component display theory, and Ruth Colvin Clark's information mapping; and is developed using templates.



Principle RIO - a type of RIO that is used when you want to create a job task that requires judgment or when guidelines must be applied

Procedure RIO - a type of RIO that is used when you want to teach a sequential set of steps to be followed by one individual to accomplish a task or make decisions

Process RIO - a type of RIO that is used when you want to teach a series of actions, changes, or functions that achieve an end result; can be mechanical, business, or scientific

Revolution in Navy Training – is all about mission accomplishment and providing Sailors with the tools and opportunities to grow professionally and personally.

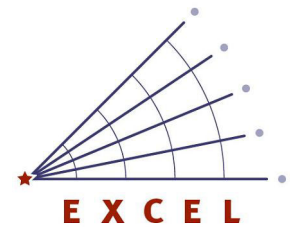
Reusable Information Object (RIO) – self-contained chunks of information built around a single learning objective. Groups of RIOs are combined to form a lesson (RLO). You can equate this to a “task.”

RIO type classifications – they are designations of the type of content material and are based on the following hierarchy: concept, fact, procedure, process, and principle.

Reusable Learning Object (RLO) – consists of small objects that can be combined to match the needs of the learner, authors, and organization. The term “reusable” is used to emphasize one of the advantages to developing smaller, chunked pieces of learning and information. You can equate this to a “lesson.”

Sharable Content Object Reference Model (SCORM) – SCORM is a collection of specifications adapted from multiple sources to provide a comprehensive suite of E-Learning capabilities that enable interoperability, accessibility and reusability of Web-based learning content.

Task Force EXCEL (TFE) – is creating major cultural change by focusing Navy learning on fleet mission requirements through use of human performance measures - providing Sailors with the “tools and opportunities” to grow and develop, professionally, and personally, while improving mission accomplishment.



Template – is something that serves as a guide or pattern